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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jeff Scott Eder

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ASSET TRUST, INC.
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SUITE 7362
BOTHELL, WA 98021

EXAMINER

CHENCINSKI, SIEGFRIED E

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/743,417	Applicant(s) EDER, JEFF SCOTT	
	Examiner SIEGFRIED E. CHENCINSKI	Art Unit 3695	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 125-155 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 125-155 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/30/10, 1/10/11, 1/17/11</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 125 – 155 are pending.

Claims 151-155 are new.

Claims 1-124 are cancelled.

Claims 125-127, 129, 131-135, 137 and 139-150 are amended.

The rejections under 35 USC 101, 112-1st and 2nd Paragraph and 103(a) are maintained.

The claim objection is withdrawn based on Applicant's amendment of the claims involved.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claims 125-132 are rejected under 35 USC 101** because the claimed invention is directed to non-statutory subject matter.

The interim guidelines issued in July 27, 2010 USPTO Deputy Commissioner Robert Bahr regarding 35 USC 101 include the following in Factors Weighing Against Eligibility. These guidelines include the following factors weighing against Eligibility:

Under Insufficient Recitation of a machine or Transformation:

- A machine is merely nominally related to the performance of the process.
- Machine is generically recited such that it covers any machine capable of performing the claimed step(s).
- A machine is merely an object on which the method operates.

Based upon consideration of all the relevant factors with respect to the claim as a whole, claims 1, 17 and 20 are held to claim an abstract idea, and are therefore rejected

as ineligible subject matter under 35 USC 101. The rationale for this finding is explained below.

Independent claim 125 recites a process comprising three steps of receiving and a step of selecting. Dependent claims 126-132 are rejected because of their dependence on independent claim 125.

Based on Supreme Court precedent, one of the tests for a proper process is for the process to be tied to another statutory class or transform underlying subject matter to a different state or thing (*Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)). Since neither of these requirements is met by the claim, the method may not be considered a patent eligible process under 35 U.S.C. 101. To qualify as a statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus that accomplished the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state. Without these elements the invention involves human interaction which is not patentable subject matter.

The machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article. See Benson, 409 U.S. at 70. Certain considerations are applicable to analysis under either branch. First, as illustrated by Benson and discussed below, the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility. See Benson, 409 U.S. at 71-72. Second, the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity. See Flook, 437 U.S. at 590. (*In re Bilski*, En banc, U.S. Court of Appeals for the Federal Circuit, Washington, DC, Oct. 30, 2008). Per *In re Bilski*, these requirements must be present in each meaningful limitation step and must not merely rely on such limitations in the preamble.

Applicant is referred to the Board of Patent Appeals and Interferences'
Informative en banc Opinion *Ex parte Langemyer et al-*

http://iplaw.bna.com/iplw/5000/split_display.adp?fedfid=10988734&vname=ippqcases2&wsn=500826000&searchid=6198805&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0

This opinion states that mathematical manipulations of data do not become patent eligible subject matter even when performed on a computer and outputted to a display.

According to the above statutory requirements, the significant solution step must contain the statutory component and must show that the machine is used in a significant manner such that human intervention is not involved, since simply a computer or processor could mean a human using a desktop computer to perform all of the linking steps by hand, only optionally using the machine. A programmed computer performing the significant solution steps is required in the context of the claimed invention.

In the instant case, the steps in independent claim 8 of receiving and generating fail to contain significant solution activity because generating reports is not a significant solution activity. A significant solution activity in the context of Applicant's specification would be one or more analyzing steps and potentially a formulating retirement plan option recommendations step. As such, it matters not that the generating step now contains the statutory component of a programmed computer since this is an insignificant solution step. It is optional for the insignificant solution steps to contain the statutory component, and the invention may very well have the statutory component also drive one or more of the insignificant solution steps. The remaining steps may contain the statutory component as well, but this is not required since they are insignificant solution activities.

It appears to the examiner that Applicant may have support for complying with the statutory requirement in this manner. For example, Figures 2A - 2D and 8A - 10D contain recommendations of a type which require analyzing and formulating and in turn would provide the logical step of providing the individual with a recommending step of options for the individual to consider for the purpose of formulating a retirement plan. This seems to provide the needed statutory support for the two significant solution steps

of analyzing by a programmed computer and formulating by a programmed computer in independent claim 8.

3. Claims 125-155 are rejected under 35 USC 101 because the claimed invention is directed to non-statutory subject matter. The independent claims 125, 133, 140 and 148, with claim 125 as exemplary, are so broad that they would monopolize a natural force or patent a scientific fact, e.g. by claiming every mode of an effect of the claimed law of nature, or, in the instant case, every mode of predictive model using stepwise regression analysis. Dependent claims 126-132 are rejected because of their dependence on independent claim 125. The independent claims merely manipulate data, regardless of what the data represents.

4. Claims 125-155 are rejected under 35 USC 101 the claimed invention lacks patentable utility. The output of a predictive model in the independent claims is not tangible and the claimed invention is not supported by either a clearly asserted utility or a well established utility. No concrete set of data relating to any specific phenomenon is being manipulated. No problem is being solved. The preamble fails to state the particular application and purpose for the use of a predictive model and the steps do not result in establishing an identifiable result. Further, no particular predictive model is specified. Therefore, an ordinary practitioner of the art would see no particular use for the claimed invention. It is as if one was looking at a table of contents in a textbook of quantitative analytical techniques without seeing a page giving particular application examples. Dependent claims 126-150 are rejected because of their dependence on the rejected independent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

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and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 125-155 are rejected under 35 U.S.C. 112, first paragraph.

Specifically, since the claimed inventions in claims 1125, 133, 140 and 148 are not supported by either a clearly asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention. Dependent claims 126-150 are rejected because of their dependence on the rejected independent claims.

6. Claims 125-155 are rejected under 35 U.S.C. 112, first paragraph. The specification's guidelines for implementing the invention are filled with subjective judgments and lack a clear set of steps for implementing the invention. No two ordinary practitioners working independently would be able to replicate the end results of another practitioner who has used this invention because of the many subjective inputs and random model outcomes involved in this invention as described in the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 125-155 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) The independent claims lack the structure needed to understand the invention. Manipulating general data with an unknown model for no stated purpose is indefinite. No problem is being solved.

b) The phrase "different types of initial predictive models for each type of model" is vague and indefinite. This is merely a game of chance in the use of undefined models.

8. Future Amendments

Applicant is advised to avoid new matter in complying with these requirements, and to refer to the locations of support in the specification when making such amendments.

Applicant Admitted Prior Art

9. Applicant has failed to traverse the examiner's Official Notice given in the last Office Action regarding the well known nature of renumbered dependent claims 2-62. Therefore, the limitations of claims 2-62 has become Applicant Admitted Prior Art (AAPA) per MPEP MPEP 2104 C 2nd parag. - AAPA - Applic. Admission due to lack of or inadequate Traversal:

If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

Applicant has not properly met the traversal requirements of MPEP 2104 regarding the Official Notice taken in the last Office Action regarding claim 126 - induction algorithm; claim 28 - genetic algorithms; claim 130 – entropy minimization, LaGrange, Bayesian and path analysis; claim 131 – tournament use; and claim 132 – a transform predictive model. Consequently, these models are now Applicant Admitted Prior Art (hereafter AAPA).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

EXAMINER'S NOTE: The art rejections below are made in light of the rejections above under 35 USC 101 and 112, the Applicant Admitted Art and the objection to independent claim 148.

10. Claims 125, 126, 129, 133, 134, 137, 141, 144, 148-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandretto (US Patent 5,812,988) in view of Jost et al. (US Patent 5,361,201, hereafter Jost), Waite (US Patent 4,441,629), Simpson (US Patent 6,266,645 B1) and Wikipedia's article entitled Standard Error and Stigler, Gauss and the Invention of Least Squares.

Re. Claims 125, 133, 140 & 148, Sandretto discloses a predictive model method, apparatus, medium and computing infrastructure, with claim 125 as exemplary, comprising:

- Accepting and receiving first input data into a plurality of different types of initial predictive models for each type of model (Fig. 1A-data storage; Col. 14, data processing, entering estimates of economic variables; a plurality of models - Fig. 1; initial predictive models resulting in initial estimates - Col. 14, l. 40);
- receiving the input data set as an inputs into a second model stage (Col. 14, l. 40 – initial estimates; Col. 14, ll. 47 – different estimates; recursive modeling – 44-45); and
- receiving said second model stage output as an input into a third predictive model stage to develop a final predictive model and output (Fig. 1; Col. 14, ll. 44-45; Col. 8, l. 52—col. 9, l. 19 – the iterative, recursive steps which has at least three or more stages in predictive modeling).

The following parts of the claim elements do not have patentable weight because they are non-functional descriptive material and/or make intended use statements:

- input that identifies a data field from the plurality of data that will be modeled and a plurality of data fields from the plurality of data that will be used for a first input data,

- using a computer to transform a plurality of data into a predictive model by completing the steps of;
- to develop an initial model configuration by selecting a best fit initial predictive model using a tournament after a training of each predictive model type is completed;
- to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof;
- where all the input data represents a physical object or substance
- where said final predictive model supports a regression analysis.
- To develop a second plurality of different types of predictive models.
- where the plurality of data represents a physical object or substance, and where said final predictive model supports a regression analysis.

Sandretto does not explicitly disclose an induction model. However, Jost discloses the use of induction modeling (Front page, OTHER PUBLICATIONS, Cronan, et. al.,) in the context of “Real Estate Appraisal Using Predictive Modeling” (Title).

Sandretto does not explicitly disclose use of a variable selection algorithm. However, Waite discloses use of a step-wise regression algorithm in the making of correlations and predictions (Col. 3, l. 46; Col. 8, ll. 7-8). Further, Simpson discloses the use of variable selection algorithms (Abstract – ll. 13-17; Col. 3, ll. 37-38, 66-67; Col. 9, ll. 20-22).

Sandretto does not explicitly disclose identifying a lowest error predictive model. However, Wikipedia discloses the mathematical statistics technique of standard error measurement which identifies the standard deviation of a data series. The model which produces data with the lowest standard deviation of errors is the lowest predictive model based on the Least Squares algorithm published in 1805. The ordinary practitioner would have been familiar with this mathematical technique.

Therefore, an ordinary practitioner of the art at the time of Applicant's invention would have seen it as obvious to have combined the disclosures of Sandretto, Jost, Waite,

Simpson, Wikipedia, Stigler and his own knowledge of the art in developing a computer-implemented predictive model method, apparatus, medium and computing infrastructure, motivated by a desire to provide a method for estimating simulated returns, asset values and risk measures using estimated financial variables pertaining to an asset, such as economic variables and asset-specific characteristics (Sandretto, Col. 1, ll. 11-15).

Re. Claim 125, 134 and 141, Sandretto discloses or suggests wherein said second model stage receives a second input data and an input data set from the initial model configuration and transforms said inputs into a summary comprising a second stage model output (Col. 14, ll. 31-61; Col. 8, l. 52—Col. 9, l. 19).

Re. Claim 129, 137 & 144, Sandretto discloses or suggests wherein an initial predictive model is linear regression (Col. 4, l. 66).

11. Claims 127, 128, 130, 131 & 132, 135, 136, 138, 139, 140, 142, 143, 145, 146, 147 and 151-155 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandretto in view of Jost, Waite, Simpson, Wikipedia, Stigler as applied to the rejections of claims **125, 133, 140 & 148 above**, and further in view of AAPA.

Re. Claims 127, 128, 130, 131 & 132, 135, 136, 138, 139, 140, 142, 143, 145, 146, 147 and 151-155, the following modeling and analytical methodologies were AAPA at the time of Applicant's invention: 126 - induction algorithm; 128 - genetic algorithms; 130 – entropy minimization, LaGrange, Bayesian and path analysis; 131 – tournament use; and 132 – a transform predictive model.

Therefore, **re. claims 127, 128, 130, 131 & 132, 135, 136, 138, 139, 140, 142, 143, 145, 146, 147 and 151-155**, an ordinary practitioner of the art at the time of Applicant's invention would have seen it as obvious to have combined the disclosures of Sandretto, Jost, Waite, Simpson, Wikipedia, Stigler and AAPA in developing a computer-implemented predictive model method, apparatus, medium and computing infrastructure making use of numerous modeling and analytical methods, motivated by a desire to provide a method for estimating simulated returns, asset values and risk measures

using estimated financial variables pertaining to an asset, such as economic variables and asset-specific characteristics (Col. 1, ll. 11-15).

Response to Arguments

12. Regarding the Applicant's arguments received on January 17, 2011 regarding claims 125-155 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Siegfried Chencinski whose telephone number is (571)272-6792. The Examiner can normally be reached Monday through Friday, 9am to 6pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Alexander Kalinowski, can be reached on (571) 272-6771.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington D.C. 20231

or Faxed to (571)273-8300 [Official communications; including After Final communications labeled "Box AF"]

or Faxed to (571) 273-6792 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to the address found on the above USPTO web site in Alexandria, VA.

SEC

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March 26, 2011

/Charles R. Kyle/

Supervisory Patent Examiner, Art Unit 3695